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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/551,362	04/18/2000	Yoshio Nagahiro	1324.63957	2495

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EXAMINER

CHUNG, DAVID Y

ART UNIT PAPER NUMBER

2871

DATE MAILED: 08/13/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/551,362

Applicant(s)

NAGAHIRO, YOSHIO

Examiner

David Chung

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) ____ is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 10-13 and 15 is/are rejected.
- 7) ☒ Claim(s) 14 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: ____

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 10 rejected under 35 U.S.C. 102(e) as being anticipated by Jung et al. (U.S. 6,317,173). Note figures 2 and 3 showing the extended portion 240 of the semiconductor layer, storage electrode 420 connected to storage line 430, and pixel electrode 800 electrically connected to the semiconductor layer via drain electrode 620 and contact holes C2 and C3. See column 6, line 32 – column 7, line 20. A capacitor is formed between semiconductor portion 240 and storage electrode 420 via insulator 300.

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Another capacitor is formed between storage electrode 420 and pixel electrode 800 via insulators 500 and 700. The two capacitors that are formed are connected in parallel.

Claims 11 rejected under 35 U.S.C. 102(e) as being anticipated by Yamamoto et al. (U.S. 6,088,071). Note figure 13 showing semiconductor layer 53a isolated from semiconductor layer 13, storage electrode 50b connected to storage line 50B, and pixel electrode 19 electrically connected to semiconductor layer 53a via contact electrode 50c formed in contact holes 55 and 57. See column 5, line 55 – column 6, line 15. A capacitor is formed between semiconductor layer 53a and storage electrode 50b via insulator 14. Another capacitor is formed between storage electrode 50b and pixel electrode 19 via insulator 18. The two capacitors that are formed are connected in parallel.

Claims 12, 13, and 15 rejected under 35 U.S.C. 102(b) as being clearly anticipated by Ikeda et al. (U.S. 5,182,661). Note figure 4A and 4B showing capacitance electrode 68 being part of and extending from the gate line 10, storage electrode 60 electrically connected to pixel electrode 22 via contact hole 66, storage electrode 62, insulator 42 separating storage electrode 68 and storage electrode 60, insulator 44 separating storage electrode 60 and storage electrode 62, and insulator 46 separating storage electrode 62 and pixel electrode 22. See column 5, line 50 – column 6, line 21. A capacitor is formed between storage electrode 68 and storage electrode 60 via insulator 42. Because the storage electrode 68 extends from the gate line, the

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gate line is part of the structure of this capacitor. Another capacitor is formed between storage electrode 60 and storage electrode 62 via insulator 44. A third capacitor is formed between storage electrode 62 and pixel electrode 22 via insulator 46. Because storage electrode 62 is made of chromium, it serves as a shading film within this display.

Response to Arguments

Applicant's arguments filed April 29, 2002 have been fully considered but they are not persuasive. Contrary to applicant's position, Yamamoto teaches that the impurity doped into lower electrode 53a may be the same as that doped into semiconductor layer 13 and may be doped during the same process. See column 5, line 63 – column 6, line 3. Further, Jung discloses that the storage region 240 is not required to be doped giving explicit fruition to both doped and undoped embodiments. See column 8, lines 25 – 30.

Allowable Subject Matter

Claim 14 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Chung whose telephone number is (703) 306-0155. The examiner can normally be reached on Monday-Friday from 8:30 am to 5:00 pm.

David Chung
GAU 2871
08/12/02



Ken Parker
Primary Examiner
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